

We wander for distraction, but we travel for fulfillment. —Hilaire Belloc

Virginia's transportation system plays a major role in defining the quality of life enjoyed by its citizens. Many people rely on the automobile as a primary mode of transportation, while others frequently use public transportation, rail commuter services, public transit, and cycling and walking to get from place to place. No matter which way people choose to travel in Virginia, a comprehensive, safe, efficient and effective transportation system is essential.

As Virginia's population grows, so do the number of vehicle trips on the road system—and Virginia is one of the fastest-growing states. In many areas of the state the road system has been overwhelmed by traffic growth. As traffic congestion increases, the demand for rail, public transportation and commuter services also increases. In some cases, residential and commercial development is occurring in areas where the existing transportation systems are not capable of meeting greater demands. Local governments approve new development projects in their jurisdictions; however, in most counties, it is the state's responsibility to provide for the road system. Continued viability of the transportation system depends on good planning. State and local governments must continually balance development with existing and proposed transportation system capacity.



I-95 just south of the Springfield Interchange. Photo by VDOT.

Transportation planning in Virginia

In Virginia, the Secretary of Transportation oversees five agencies – the Virginia Department of Transportation (VDOT), the Department of Rail and Public Transportation (DRPT), the Department of Aviation, the Department of Motor Vehicles and the Virginia Port Authority. *VTrans2025* is Virginia's statewide multimodal long-range transportation plan and serves as the guiding document for all the Commonwealth's transportation agencies.

VTrans2025 provides a comprehensive, integrated approach to meeting the transportation needs of our growing population and economy. *VTrans2025* is led by the Office of the Secretary of Transportation, and is coordinated through the five modal agencies. Representatives from the Virginia Association of Planning District Commissions, several metropolitan planning organizations and the Federal Highway Administration also participate in the *VTrans2025* planning effort.

One issue identified in *VTrans2025* is the need to improve coordination of land use and transportation decisions. Local land use decisions and transportation system enhancements are unavoidably related. In Virginia, land use management rests with local governments and transportation system management rests with the state. Issues arise when there are differences in state and local perspectives, as well as different timeframes for development activities. The state's role is to safeguard the Commonwealth's transportation network and represent the public's interests, while localities address transportation, economics and local land development. Also, land use decisions can be approved in a relatively short time frame (less than a year), while transportation projects can take a decade or more for planning, funding and construction.

Findings

- The U.S. Department of Transportation administers the Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2005. SAFETEA-LUE, as



8th Annual Virginia Bike Walk conference in downtown Lynchburg. Photo by VDOT.

this act is called, provides funding and direction for the development of multimodal transportation systems in the country. Funding is available for bicycle, pedestrian, safety, transportation enhancements and other projects that affect our lives and offer alternatives to vehicular travel.

- *VTrans2025* serves as the blueprint for transportation planning across all modes at the state level. The *VTrans2025* final report includes an analysis of issues, multimodal needs assessment, gap analysis, policy recommendations, and vision, goals and objectives.
- The *VTrans2025* final report identified numerous policy recommendations in the areas of funding and investment, land use, connectivity and priority setting. A *VTrans2025* action plan was prepared in April 2005 to identify specific steps necessary to implement the policy recommendations and otherwise further multimodal planning in the Commonwealth. The action plan identifies key initiatives of the Commonwealth's new Multimodal Transportation Planning Office, including the development of a progress report, performance report, multimodal freight study, identification of major statewide multimodal corridors, and coordination and outreach.
- Automobile-oriented communities make it difficult to integrate walking into daily routines. In a 2002 survey, the Bureau of Transportation Statistics reported that approximately one-quarter of all walking trips take place on roads without sidewalks or shoulders, and bike lanes are available for only 5 percent of bike trips.
- Wildlife crossings can help restore connectivity where roads have fragmented habitat, provide greenway connections for self-powered travelers, and improve the safety of motorists.

Recommendations

- Transportation planners and state and local entities should place greater emphasis on providing alternatives to the use of private automobiles for daily activities. Consider transit systems, bicycle and pedestrian accommodations, improved community design, and encourage a change in people's attitudes toward transportation alternatives to meet future capacity needs and energy constraints.
- As an alternative to building wider highways, transportation planners should consider moving truck traffic onto rail where the correct combination of commodities, distance, cost and delivery time permit. *VTrans2025* is conducting a Statewide Multimodal Freight Study to focus on critical freight transportation infrastructure across the state. This study will provide recommended improvements to the system, guidance on the appropriateness of diverting freight to rail and regulatory requirements.
- Transportation planners should facilitate the efficient movement of people and goods, expand choices and improve interconnectivity of all transportation modes.
- Transportation planners should eliminate potential transportation barriers for the public and improve the linkages of recreation areas across major transportation corridors.
- State and local entities should establish a formal multi-agency process for evaluating and developing public access sites for bridge crossings of recreational waterways and at the end of road rights-of-way.
- State and local entities should improve coordination of land use and transportation planning. VDOT is in the process of developing regulations in response to recent General Assembly legislation requiring localities to seek VDOT comment on all comprehensive plans, rezonings, subdivisions and site plan analyses.
- The Department of Conservation and Recreation (DCR) and DRPT should establish a process for working with railroads on rails-with-trails and crossings of railroads for water access purposes.
- VDOT should work with local governments to encourage the development of a permanent process for integrating the recommendations of local public health agencies and active living into all phases of land use planning.
- VDOT should conduct habitat connectivity studies to determine where wildlife passageways are needed,

Transportation Programs

increase the use of signage to make motorists aware of wildlife in the area, and reduce speed limits in wildlife areas for future transportation projects.

- VDOT should consider the needs of bicyclists and pedestrians when making improvements to designated Virginia Byways.
- VDOT should provide route number signs on the sides of bridges to orient river users to their location. There is a particular need along existing water trails as mapped in the Water Access section of Chapter VII.

Virginia Department of Transportation

VDOT is responsible for building, maintaining and operating the state's roads, bridges and tunnels to facilitate the efficient and safe movement of people and goods. VDOT works closely with the other state transportation agencies on issues related to rail, transit, aviation and ports. Virginia has the third largest state-maintained highway system in the country, just behind Texas and North Carolina. VDOT has roughly 8,800 employees, making it one of the three largest state agencies in Virginia.



Road Maintenance Crew. Photo by VDOT

The Commonwealth Transportation Board guides the department's work, acting like a board of directors. The Secretary of Transportation serves as chairman, and the Commonwealth Transportation Commissioner serves as vice-chairman. The Governor appoints the 17 board members. The Director of the Department of Rail and Public Transportation also sits as a non-voting member. Board meetings are held monthly and are open to the public. The Commonwealth Transportation Board oversees both VDOT and DRPT.

State Bicycle and Pedestrian Program

VDOT's state bicycle and pedestrian program promotes bicycling and walking within the state. Since the late 1970s it has provided planning assistance to state and local transportation planners, activity coordination for various bicycle committees, and bicycle and pedestrian education and safety promotions.

The guiding policy document for bicycling and walking is the Commonwealth Transportation Board's *Policy for Integrating Bicycle and Pedestrian Accommodations*, adopted in March 2004. It can be found at: www.virginiadot.org/bikepedpolicy. This policy establishes cycling and walking as "fundamental travel modes." In 2006, a goal was established of allocating two percent of annual repaving expenditures throughout the VDOT system for providing paved shoulders that would enhance the traveling environment for cyclists and pedestrians. This amounts to approximately \$4 million per year.

The Bicycle and Pedestrian Policy Committee is responsible for ensuring consistent implementation of bicycle and pedestrian policies within VDOT. The Committee periodically reviews, evaluates and recommends modifications to VDOT's bicycle and pedestrian policies and practices. It is the primary forum in which information on bicycle and pedestrian issues is considered and developed. The team consists of the VDOT district bicycle and pedestrian coordinators and representatives from the following VDOT divisions: Asset Management, Location and Design, Local Assistance, Structure and Bridge, Traffic Engineering, Transportation and Mobility Planning, and Programming.

VDOT continues to improve technical assistance to local governments and nonprofits seeking to accommodate bicyclists and pedestrians. The creation of a balanced transportation system is fundamentally a local issue. VDOT helps guide local efforts and responds to priorities established at the local level. Citizens are encouraged to work with local planners and elected officials to make their needs known. VDOT points of contact include bicycle and pedestrian coordinators in each construction district and the statewide coordinator.

VDOT partners with other state agencies in the areas of healthy communities, safety education and encouragement of bicycling and walking opportunities. Program staff members also assist with bicycle and pedestrian related studies.



Bicyclists on the Colonial Parkway. Photo by VDOT.

State bicycle routes

VDOT maintains 838 miles of the United States Numbered Bicycle Route (USBR) system, more than any other state. USBR 1 and USBR 76 are mainly located on rural secondary roads and offer a variety of riding experiences. Planned improvements include a statewide study to identify segments for re-routing to avoid concentrations of heavy traffic, sections that would benefit from paved shoulders and a major effort to improve route designation signage.

State bicycle map

VDOT developed the first statewide bicycle map. It illustrates the location of USBR 1 and 76 in Virginia, as well as trails and other facilities of statewide significance. The map document serves as a "gateway" to a wealth of bicycling opportunities and information available on the Internet. It provides safety information, detailed maps for travelers, a snapshot of the commuter network in northern Virginia, and tips for safe, enjoyable riding. The map also helps bicyclists plan rides suited to their skills. Elevation profiles on featured routes show whether the ride is on flat, hilly or mountainous terrain. Other symbols indicate rural or urban settings and three surface types. Additional icons indicate locations of rail-to-trail rides, family-friendly facilities and mountain biking trails, plus some suggested camping and food facilities.

Education

To support bicycle safety education programs, VDOT works with the Department of Education, the Department of Health's Center for Injury Prevention and the Department of Motor Vehicles. These programs help educators, civic groups and parents teach children about traffic rules and safe riding, as well as help children gain bicycle-handling skills.

Scenic Highways and Virginia Byways Program

VDOT and DCR administer the scenic roads program. This program is discussed in more detail in Chapter VII-E. VDOT updates and publishes a scenic roads map on a periodic basis.

Highway Beautification Program

VDOT designs, installs and maintains attractively landscaped medians, shoulders, interchanges and rest areas along the state's highways and byways. These attractive improvements contribute to everyone's enjoyment of driving. Additionally, VDOT has established standards for vegetation management that encourage correct pruning of trees, shrubs and ground covers.

Recreational Access Road Program

VDOT administers the Recreational Access Roads program under §33.1-223 of the *Code of Virginia*. Funds appropriated under this program can be used for the construction and maintenance of roads and bikeways providing access to public recreational areas and historical sites.

The Commonwealth Transportation Board allocates the sum of \$3 million for the construction, reconstruction, maintenance or improvement of access roads and bikeways within counties, cities and towns. Funds from this program can be used when the director of DCR designates a public recreational area as such. They can also be used when the director of the Department of Historic Resources determines a site or area to be historic and recommends that an access road or bikeway be provided or maintained. In addition, these funds may also be used when the governing body of the county, city or town in which the access road or bikeway is to be provided or maintained passes a resolution requesting the road and adopts an ordinance pursuant to the *Code of Virginia* § 15.2-2280 et seq.

Transportation Enhancement Grants

The federal Transportation Enhancement program was first established by the Intermodal Surface Transportation Efficiency Act (ISTEA) enacted by Congress in 1991. The legislation required each state to set aside 10 percent of its Surface Transportation Program (STP) funds for enhancement activities. The legislation established 12 eligible activities meant to improve non-motorized transportation, enhance the public's traveling experience, revitalize communities and improve the quality of life. These federal funds

Transportation Programs

cannot be used for roadway improvements or traditional highway projects.

To qualify for federal Transportation Enhancement funds a project must have a relationship to surface transportation and must qualify under one or more of the 12 eligible activities. Projects may relate to transportation through function (trails or historic bridge restoration), impact (a rain garden to mitigate run-off), or proximity (removing billboards from a highway viewshed). Approximately 75 percent of funded projects involve some improvements for bicycling, walking, or both.

Scenic River Crossings

The General Assembly has designated 20 scenic rivers in the Commonwealth. In most cases, these scenic rivers are crossed by state roads. VDOT has placed signage at these crossings so travelers know they are going over a scenic river. However, many bridges have guardrails for safety reasons that do not afford a view of the river. In many other cases, VDOT has installed railing systems that afford views of the river. Where appropriate, all future scenic river bridge crossings should allow a view of the river.

Safe Routes to School

The purpose of the Federal Safe Routes to School (SRTS) Program is to address issues of traffic congestion and air quality around schools, as well as pedestrian and bicycle safety. In addition, a growing body of evidence has shown that children who lead sedentary lifestyles are at risk for a variety of health problems such as obesity, diabetes and cardiovascular disease. Safety issues are also a big concern for parents, who consistently cite traffic danger as a reason why their children are unable to bicycle or walk to school. At its heart, SRTS empowers communities to make walking and bicycling to school a safe and routine activity once again. The program makes funding available for a wide variety of programs and projects, such as building safer street crossings and establishing programs that encourage walking and bicycling safely to school. Between 1977 and 1995, the number of yearly pedestrian trips declined 21 percent among Americans. In 1969, approximately half of all schoolchildren walked or bicycled to or from school; today, fewer than 15 percent of children and adolescents use their own power to get to school. Although there has been a significant decline in the number of children who walk and bicycle to school over the past 30 years, SRTS is working with communities to reverse this trend.



Crozet Elementary School participate in a "Walking Friday" event. Photo by Alliance for Community Choice in Transportation.



Safe crosswalks improve connections and contribute to healthy communities. Photo by VDOT.

Healthy Communities

VDOT participates in the Virginia Department of Health's Division of Chronic Disease's healthy communities project. This project, which is one of 11 projects nationwide supported by the Centers for Disease Control, focuses on making the places where people live, work and go to school healthier by introducing physical activity into the community environment.

VDOT and DCR are working together to encourage non-motorized access as part of park master planning and to emphasize non-traditional transportation corridors, such as greenways, in the transportation mix. Greenways contribute to a healthy community by providing alternative transportation modes, as well as places to exercise that are free of vehicles.

Public water access at bridge crossings

The need for access to the waters of the state for recreation has been identified as one of the highest needs by respondents to the 2006 *Virginia Outdoors Survey*. Many highway bridges span suitable recreational waterways where a boat ramp or hand carry launch and parking area would provide access to a

river. VDOT must balance the scenic aspects of bridge crossing with the necessary safety precautions. Guardrails are installed to address existing or potential safety issues, and sometimes can obstruct scenic views. VDOT does not intentionally seek to block access. It is recommended that where popular river sections do not have a formal public access facility, efforts should be made to establish one in coordination with the locality and property owners. The best time to do this may be when a bridge is being replaced.

It is recommended that a protocol be established between DCR, VDOT and the Department of Game and Inland Fisheries (DGIF) to screen bridge replacement projects to determine whether the waterway being crossed is suitable for establishment of public access. If it is determined that public access is needed at the site, then a negotiation process between the state, locality and adjacent landowners should take place in conjunction with the bridge replacement project. A dedicated source of funding for water access should be tied to this effort. DGIF manages the state's public access program, but the use of their funds is limited to power boating access in most cases. VDOT also has limited funding capability for construction of these types of access. Additional funds are needed to construct access sites for hand carry boats and fishing access.

Land Use and Transportation Planning Activities

In addition to the above programs, VDOT is in the process of developing regulatory guidance on the review of local comprehensive plans, site plans, rezonings and subdivisions as required by recent legislation (§ 15.2-2222.1). This review process will enable VDOT to better examine local land use decisions made on, or along, the state transportation network, providing an opportunity for VDOT to comment to local government officials during the land use decision making process.

Department of Rail and Public Transportation

As a state agency reporting to the Secretary of Transportation, DRPT works closely with VDOT, which is responsible for highways. Each of DRPT's three areas (rail, public transportation and commuter services) focus on the movement of people and goods throughout Virginia.

Rail transportation

Rail transportation involves the movement of people and goods on railways owned and operated by private railroad companies. There are more than a dozen railroad companies and services in Virginia, including Norfolk Southern, CSX, Amtrak, VRE and nine short line railroads. Freight rail programs help ensure the economic vitality of businesses and communities with a cost-effective, reliable way to bring goods to market, while passenger rail programs relieve congestion on highways and offer travelers more transportation choices.

A single intermodal train can take around 280 trucks off the road, while a carload train can take 500 trucks off the road. In 2001, the railroads hauled 189 million tons of freight to, from, through and within Virginia. At 15 tons per truckload, it would take 12.6 million annual truck trips (around 38,000 to 40,000 per day) to move this much freight.

Additional benefits of rail transportation include:

- Improved air quality and reduced use of fossil fuels. For every ton-mile of freight, rail produces around one-third the particulate matter and nitrogen oxide emissions of trucking.
- Improved safety. By reducing congestion on critical highway segments, rail contributes to lower accident rates and increased safety. Rail is the safest mode for hazardous materials shipments, with substantially fewer HAZMAT releases than trucking.
- Improved mobility and choice for Virginia's commuters. In comparison to driving and parking costs, passenger rail can be a more affordable alternative. Passenger rail also provides an alternative to traveling on congested roadways. Reliable passenger rail service is a "safety net," providing positive redundancy in the Commonwealth's transportation system.

Rails-with-Trails Program

Rail lines are in use across the Commonwealth, and there are many locations at which highways cross the railroad. Railroads are concerned about the safety of their personnel, their equipment and the public at any location where rail lines interface with the public. They are reluctant to have the public on their property for any public purpose due to these concerns. It is preferable that all crossings be grade separated to minimize the impact on roadway traffic flow and the risk of accidents. Where a crossing must be at the same level as the road, warning systems are used to indicate the presence of the railroad. These warning systems may be passive in low traffic areas, with just a sign indicating the presence of the railroad. In high traffic areas active warning systems are used, which include gates and flashing lights.

Many localities and citizen groups have designed trail systems that must cross or run parallel to active rail lines. Also, there are many locations in Virginia where rail lines that follow rivers limit public access to the waterway for launching or retrieving boats. Often the public can cross rail lines at locations where a public crossing already exists. However, at times there is no reasonable alternative to crossing the rail line at certain locations or placing a trail alongside a rail line, creating a rails-with-trails situation.

DCR, DRPT, Norfolk Southern Corporation and CSX have been discussing a procedure for evaluating crossing proposals and determining whether they have merit and address liability issues. The railroad companies have agreed to work with the Commonwealth to determine whether or not their concerns can be adequately addressed. DRPT has commissioned a study of existing rails-with-trails in other states to identify ways in which liability, safety and trespassing issues have been addressed.